

Machinery and Manufacturing

Title

Stirling Engine Power drive by Swiss roll combustors Output System

Abstract

This technology is used in Stirling engine power generation system. Currently it can deliver 16W of electrical power output when engine is under normal pressure condition, which is a level that have not been achieved by the current market. The main reason that this system able to have such good performance is because a whole newly invented design of combustors have been made. The Stirling engine is placed on one side of the surface of the combustors with additional pin fins array assembled, which is the engine hot end. The other side of the surface is the newly design of Swiss roll combustors. The fact that the module are integrated together, the heat generated by the combustion burner is able to covert and transfers to the engine bottom plate efficiently and increase the energy transmission efficiency. The nano-platinum catalyst is placed inside the burner, which can completely burn relatively low order gaseous fuels including biogas, natural gas and synthetic gas at a relatively low temperature. This system can accept variety and different types of biomass fuels, Thus, complied with domestically promoted green technology policies with biogas power generation and gasification biomass which can assist in achieving the goal of a green and friendly environment.

Benefits

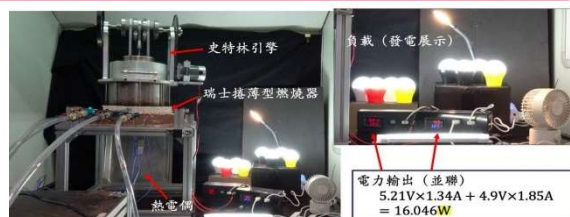
1. Simple structure, combining high-efficiency burner and heat transfer plate into a single device
2. The distinguished pin-fin structure dramatically improves the surface heat transfer efficiency
3. The burner is light in weight, thin, small in size, and can also burn various low-heating-value fuels efficiently
4. Greatly reducing the thermal resistance and improve heat exchange efficiency

Keywords

Dual spiral tunnel, Pin fin, Stirling engine

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Contact Us

Department : NCKU Innovation Headquarters
 Contact person : Lucy Huang
 Phone number : 06-2360524 Ext. 118
 Email : lilyhu@mail.ncku.edu.tw

